

App. No. 09/511,330

Office Action Dated July 6, 2004

REMARKS

The Examiner has objected to the Figures, rejected claim 6 under 35 U.S.C. § 112, paragraph 2 as indefinite, rejected claims 103 and 6-10 under 35 U.S.C. § 103 as unpatentable, rejected claims 4 and 5 under 35 U.S.C. § 103 as unpatentable, and rejected claim 5 under 35 U.S.C. § 103 as unpatentable. These objections and rejections are traversed to the extent that they are maintained.

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. Claim 6 and Figures 1-3 are hereby amended. No new matter has been added.

Figures 1-3 were amended. Commas in the frequencies were replaced with periods.

Claim 6 was rejected under 35 U.S.C. 112, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner cited insufficient antecedent basis for claim limitations. The amendment to the claim dependencies resolves this rejection. Claim 6 has been amended to depend on claims 2, 4, and 5.

In the Office Action, the Examiner indicated that claims 1-3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnstone (US 5,898,680) in view of Renard (US 6,081,691). Regarding claims 1, 7, and 10, the examiner notes that the Johnstone device comprises a preprocessing module consisting of LNA (90, figure 5) and RF front end & QPSK demodulator (92, figure 5), however, Johnstone describes a function that differs from claimed pre-processing module. The role of the LNA (90, figure 5) is to amplify the multi-carrier signals received by the digital broadcast antenna (80) that is connected to the digital broadcast receiver (82). The amplified signals are then used as input data for the demodulator (92, figure 5). The demodulator, in turn, is connected to a first time division demultiplexer (94) which recovers the audio channels, and to a second time division demultiplexer (96) which recovers the channels carrying image data. The demodulator determines if transmission is to the audio decoder (98) or

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image decoder (106). (See Johnstone column 11, lines 43-58.) The audio decoder (98) or image decoder (106) are integrated into the digital broadcast receiver (82). The claimed pre-processing module differs from that of Johnstone. The claimed is a single and unique pre-processing module, common to the multi-carrier signals (DAB in particular) and to the geo localization signals (GPS for example). The claimed invention allows an optimum sharing of the material resources, in order to reduce the material complexity and consumption of this dual-mode receiver.

Johnstone teaches a juxtaposition of a GPS receiver with its own GPS antenna and that of a digital broadcast receiver with its own reception antenna. In order to pronounce the difference between the claimed invention and Johnstone, prior art GPS receiver (84, figure 5) can be compared to claimed data processing sequence (23, figure 2). Prior art digital broadcast receiver (82) can be compared to claimed multimedia data processing sequence (22, figure 2). However, the prior art does not provide a similar solution to claimed pre-processing module (21, figure 2).

The claimed module is common to the processing of the two types of signals (multi-carrier and geo localization) as can be seen on figure 2. Prior art does not provide a pre-processing module common to the GPS receiver (84) and to the digital broadcast receiver (82). What has been considered a pre-processor in the office action only affects the signals being input to the digital broadcast receiver (82).

The prior art module distinguishes between two types of multi-carrier signals (audio and image), but does not distinguish between multi-carrier signals (multimedia data) and signals carrying geo localization data.

The combination of Johnstone and Renard does not meet the claimed invention since Renard teaches only a single receiver architecture. Without overcoming the deficiencies of Johnstone, one could not arrive at the claimed invention by combining Johnstone, Renard, and Green or Groshong. Green teaches only a low cost analog-digital conversion method. Groshong teaches only the advantages of using a "1-bit" quantifier method. Claims 2-3, 6, 8-9 should be reconsidered allowable based upon dependency to claim 1.

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In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, John J. Gresens, Reg. No. 33,112, at (612)371-5265.



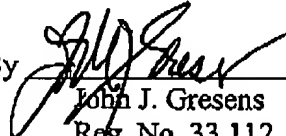
Respectfully submitted,

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Dated: October 16, 2004

By


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